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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/560,763

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Bernd Rumpf

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COHEN, PONTANI, LIEBERMAN & PAVANE LLP

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SUITE 1210

NEW YORK, NY 10176

EXAMINER

FITZGERALD, JOHN P

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/560,763	Applicant(s) RUMPF, BERND	
	Examiner JOHN FITZGERALD	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-9,11,12 and 14-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-9,11,12 and 14-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see pages 4 and 5, filed 13 April 2010, with respect to rejections under 35 U.S.C. 112, first paragraph, have been fully considered and are persuasive.

2. Applicant's arguments filed 13 April 2010 have been fully considered but they are not persuasive. Applicant argues against the combination of the Netzer and Kirkpatrick references, simply stating that they cannot be combined due to physical constraints regarding components. The Examiner respectfully disagrees. Clearly, both the Netzer and Kirkpatrick references both disclose capacitive level sensors, both comprising capacitors and a change in capacitance to determine a level within a container/tank, and both disclose "protection" of components from contact with the material level which is being measured or from moisture (i.e. any other material within the tank/container) as well as a wide operable temperature range. which is being measured (Netzer, col. 9, lines 40-45 and Kirkpatrick: col. 4, lines 67 to col. 5, line 2). Applicant has not made any arguments against these motivations and/or reasons to combine in the rejection made by the Examiner. Furthermore, in response to applicant's argument that the Netzer and Kirkpatrick references cannot be combined, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In the instant case, clearly Netzer and Kirkpatrick both teach protection means/methods for the testing/measuring circuitry/elements, thus easily teaching one of ordinary

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skill in the art at the time the invention was made to protect all testing/measuring circuitry from contamination or degradation. It appears that Applicant's instant invention appears to only provide an enclosure for testing/measurement circuitry for protection from the liquid/fluid being measured, which both Netzer and Kirkpatrick clearly disclose. Lastly, Applicant has made no arguments against the combination of the Netzer, Kirkpatrick and Yamamoto references, only declaring that the Yamamoto reference fails to "cure" the deficiency of the combination of the Netzer and Kirkpatrick references, which the Examiner has refuted above.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1, 3, 7-9 and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,490,920 to Netzer and US 3,950,653 to Kirkpatrick. Netzer discloses a method of manufacturing an electronic circuit arrangement and the electronic circuit for measuring a fuel level within a motor vehicle fuel tank including arranging electronic modules on a substrate (Cc1 and Cc2); fixating the substrate with respect to a fuel tank wall (Netzer: col. 1, lines 50-55; col. 4, lines 1-5, 30-35) (as recited in claims 16-19); and soldering (note: soldering is defined in the most broadest reasonable interpretation as "joining" or "uniting") a metal cap to the substrate to form an encapsulated space, the modules being disposed in the encapsulated space and separated from any fuel or vapor outside the encapsulated space (Netzer, col. 9, lines 40-45) (as recited in claims 1, 3, 7 and 9); wherein the substrate includes one or more electrical through-connections to an outside of the fuel tank (Netzer: Figure 8a) (as recited in claim 8). Netzer does not

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specifically disclose that "no part of the electronic circuit arrangement is exposed to any fuel or vapor" as recited in claims (1, 3, 7 and 9). However, Netzer specifically discloses the "protection" of components from contact with the liquid/fuel) (Netzer, col. 9, lines 40-45).

Kirkpatrick teaches a level measurement device employing an electronic circuit arrangement having a substrate (14) with multiple components (see Figs. 1 and 3) having wires exiting from the container wherein all components of the electronic circuit arrangement are prevented from exposure to the material (liquids, metals, granular organic materials; Kirkpatrick: col. 4, lines 63-67) being measured within the tank/container by a housing (11) and cap (12) and is sealed. It would have been obvious to one having ordinary skill in the art at the time the invention was made to fully enclose all of the electronic circuit's elements and substrate, as taught by Kirkpatrick, modifying the electronic circuit arrangement disclosed by Netzer, resulting in a completely sealed probe that is unaffected by moisture, as well as being operable over a wide temperature range since calibration is not critical (Kirkpatrick: col. 4, line 67 to col. 5, line 2).

5. Claims 5, 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,490,920 to Netzer and US 3,950,653 to Kirkpatrick as applied to claims 1, 3, 7 and 9 above, and further in view of US 5,821,455 to Yamamoto. Netzer and Kirkpatrick disclose a method for manufacturing an electronic circuit and the circuit arrangement for measuring the fuel level in a motor vehicle fuel tank having all of the elements stated previously. Netzer and Kirkpatrick do not specifically disclose a ceramic substrate. Yamamoto disclose a ceramic substrate (Yamamoto: claim 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a ceramic substrate, as taught by Yamamoto, since fixing a lid/cap to a ceramic substrate prevents splashing onto the substrate (Yamamoto: col. 1, line s19-

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22). Furthermore, it would have been an obvious matter of design choice to employ any type of substrate, ceramic or otherwise, since applicant has not disclosed that a ceramic substrate solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with any type of substrate made of any desired type of material, based on the application.

6. Claims 6, 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,490,920 to Netzer and US 3,950,653 to Kirkpatrick as applied to claims 1, 3, 7 and 9 above, and further in view of Applicant's Disclosed Prior Art (hereinafter, ADPA). Netzer and Kirkpatrick disclose a method for manufacturing an electronic circuit and the circuit arrangement for measuring the fuel level in a motor vehicle fuel tank having all of the elements stated previously. Netzer and Kirkpatrick do not specifically disclose that one or more of the electronic modules are magnetically driven circuit or ultrasound circuit for effecting the measuring. ADPA states that physics-based measuring technologies (i.e. magnetic or ultrasonic) have been found advantageous in use (instant application: page 3, second para.). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ any type of "advantageous" electronic circuit components, including a magnetically driven or one employ ultrasonic capability, since Applicant has disclosed their advantageous use is known.

7. Claims 6, 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,490,920 to Netzer and US 3,950,653 to Kirkpatrick as applied to claims 1, 3, 7 and 9 above, and further in view of US 5,085,077 to Stapleton et al. Netzer and Kirkpatrick disclose a method for manufacturing an electronic circuit and the circuit arrangement for measuring the fuel level in a motor vehicle fuel tank having all of the elements stated previously. Netzer and Kirkpatrick do

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not specifically disclose that one or more of the electronic modules are magnetically driven circuit or ultrasound circuit for effecting the measuring. Stapleton et al. disclose an ultrasonic liquid measuring device (see Figs. 1 and 2) having a circuit board with components (50) which are sealed. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ an ultrasonic component, modifying the invention disclosed by Netzer and Kirkpatrick, thus providing a system capable of correcting for an error caused by non-uniform vapor density (Stapleton et al.: col. 2, lines 40-44).

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Fitzgerald whose telephone number is (571) 272-2843. The examiner can normally be reached on Monday-Friday from 7:00 AM to 3:30 PM. If attempts to

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reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams, can be reached on (571) 272-2208. The central fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John Fitzgerald/
Primary Examiner, Art Unit 2856
6/29/10